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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,120	07/11/2003	George G. Blankenship	LEEE 200322	2939
27885	7590	03/03/2005	EXAMINER	
FAY, SHARPE, FAGAN, MINNICH & MCKEE, LLP 1100 SUPERIOR AVENUE, SEVENTH FLOOR CLEVELAND, OH 44114			SHAW, CLIFFORD C	
			ART UNIT	PAPER NUMBER
			1725	
DATE MAILED: 03/03/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/617,120

Applicant(s)

BLANKENSHIP ET AL.

Examiner

Clifford C Shaw

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 0711 and 1210.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

**Detailed Action**

1.) The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the rectangular cross section as in claims 11, 14, 17, 20, 23, 26, 35, and 40 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2.) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3.) Claim 41 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the last line of claim 41, there is no antecedent basis for "said ring", making it unclear what the scope of the claim is.

4.) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5.) Claims 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker (4,694,387). The patent to Walker (4,694,387) discloses a saturable reactor ring (element 10 in figure 1), which bead will "saturate almost immediately" as discussed at lines 1-4 of column 4 of the patent. The claims differ from Walker (4,694,387) in calling for a particular value of a saturation flux and in calling for an intended use of the ring for delaying the voltage of a primary winding circuit. These differences do not patentably distinguish over the prior art. It is considered obvious that the saturation of the ring by itself in Walker (4,694,387) is below the limit claimed since Walker (4,694,387) recognizes that the saturation value of his ferrite ring is very low. In regard to the claimed intended use of the ring, it is considered obvious that the reactor ring of Walker (4,694,387) would necessarily delay a voltage as claimed, if it were

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suitably placed in a power supply circuit, thereby satisfying whatever structural limitation the intended use language could be considered to impose.

6.) Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walker (4,694,387) as applied to claims 33 and 34 above, and further in view of Taniguchi (6,700,357). The only aspect of the claim to which the rejection above does not apply is the provision for a rectangular cross section for the ring. This difference does not patentably distinguish over the prior art. At the time applicant's invention was made, it would have been obvious to have configured the ferrite ring in Walker (4,694,387) with any cross section known to be convenient for a ferrite ring. In particular, it would have been obvious to have used a rectangular cross section, the motivation being the teachings of Taniguchi (6,700,357) that such is advantageous for a ferrite ring (see element 101 in figure 8 of Taniguchi (6,700,357)).

7.) Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker (4,694,387) as applied to claims 33 and 34 above, and further in view of the British document no. 1,310,361 (cited by applicant). It would have been obvious to have provided the ferrite ring of Walker (4,694,387) with a heat sink as claimed, the motivation being the teachings of the British document no. 1,310,361 that such is advantageous for a ferrite ring (see figure 1a, element 3 and the discussion at lines 55-75 in the British document no. 1,310,361).

8.) Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walker (4,694,387) taken with Taniguchi (6,700,357) as applied to claim 35 above, and further in view

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of the British document no. 1,310,361. It would have been obvious to have provide the ferrite ring of Walker (4,694,387) with a heat sink as claimed, the motivation being the teachings of the British document no. 1,310,361 that such is advantageous for a ferrite ring (see figure 1a, element 3 and the discussion at lines 55-75 in the British document no. 1,310,361).

9.) Claims 1-10, 12, 13, 15, 16, 18, 19, 21, 22, 24, 25, 27-32, 39, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker (4,694,387) as applied to claims 33 and 34 above, and further in view of Blankenship (5,351,175, cited by applicant). It would have been obvious to have incorporated the ferrite ring of Walker (4,694,387) into any well known type of inverter power supply. In particular, it would have been obvious to have incorporated the ferrite ring of Walker (4,694,387) into a welding power supply as claimed, the motivation being the teachings of Blankenship (5,351,175) that two switch inverter power supplies such as that protected by the ring in Walker (4,694,387) are advantageously used for welding (see figure 1 of Blankenship (5,351,175), note that the circuit topology associated with S1 and S2 is similar to the protected circuitry of 101 and 102 in Walker (4,694,387)).

10.) Claims 11, 14, 17, 20, 23, 26, 40, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker (4,694,387) taken with Taniguchi (6,700,357) as applied to claim 35 above, and further in view of Blankenship (5,351,175). It would have been obvious to have incorporated the ferrite ring of Walker (4,694,387) into any well known type of inverter power supply. In particular, it would have been obvious to have incorporated the ferrite ring of Walker (4,694,387) as modified by Taniguchi (6,700,357) above into a welding power supply as

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claimed, the motivation being the teachings of Blankenship (5,351,175) that two switch inverter power supplies such as that protected by the ring in Walker (4,694,387) are advantageously used for welding (see figure 1 of Blankenship (5,351,175), note that the circuit topology associated with S1 and S2 is similar to the protected circuitry of 101 and 102 in Walker (4,694,387)).

11.) Claims 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker (4,694,387) taken with the British document no. 1,310,361 as applied to claims 37 and 38 above, and further in view of Blankenship (5,351,175). It would have been obvious to have incorporated the ferrite ring of Walker (4,694,387) as modified by the British document no. 1,310,361 above into any well known type of inverter power supply. In particular, it would have been obvious to have incorporated the ferrite ring of Walker (4,694,387) into a welding power supply as claimed, the motivation being the teachings of Blankenship (5,351,175) that two switch inverter power supplies such as that protected by the ring in Walker (4,694,387) are advantageously used for welding (see figure 1 of Blankenship (5,351,175), note that the circuit topology associated with S1 and S2 is similar to the protected circuitry of 101 and 102 in Walker (4,694,387)).

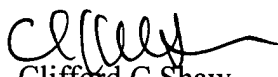
12.) The patents to Blankenship (5,349,157), Tabata et al. (4,418,265), Constable (3,678,341), Frungel et al. (3,300,682), and Ellwood (2,594,890) are cited to show prior art electrical circuits and power supplies wherein a ferrite ring is used to protect circuit elements.

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Any inquiry concerning this communication should be directed to Clifford C Shaw at telephone number 571-272-1182. The examiner can normally be reached on Monday through Friday of the first week of the pay period and on Tuesday through Friday of the second week of the pay period.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas G. Dunn, can be reached at 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Clifford C Shaw  
Primary Examiner  
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March 1, 2005